

maintained by itself in the Kgl. Bot. Museum at Berlin. Each specimen is numbered serially and all is thoroughly indexed so that the collection is more readily accessible than any other of the historic collections. The sheets enclosed in covers tied with tape after the usual continental method, are arranged in volumes of convenient size and stand side by side in a special case in the room used until recently by the late Professor Schumann for a study. The sheets are a trifle larger than foolscap paper and the plants are mostly in an excellent state of preservation. There is sometimes a little doubt about his "types" being the originals on which he based his species, as he is said at times to have given away his originals in those species of which he afterwards secured better material. Our own Muhlenberg was a correspondent of Willdenow so that his collection includes many species from the United States.

WILLIAM MARRIOTT CANBY

BY H. H. RUSBY

Mr. William Marriott Canby, one of the foremost citizens of Wilmington, as indeed of the State of Delaware, died on March 10 at Augusta, Georgia, to which place he had gone to recover from the effects of a series of colds from which he had been suffering during the winter. In his death, the botanical fraternity of America loses one of its most genial associates, as well as one of its keenest and most judicious discriminators of plant forms.

Mr. Canby was born in Philadelphia, on March 17, 1831. His early education was obtained in the schools, mostly private, of Wilmington, whither his parents moved during his early childhood. He afterward attended a Quaker institution at Chadd's Ford, on the Brandywine. After his graduation, the state of his health apparently demanding an out-of-door life, he engaged in agriculture, near Coatesville, Pa. This country life was chiefly responsible for the development of Mr. Canby's very great love of plant-life, although inheritance, and an early association with students of botany, had already given him a predilection for that study. He studied and collected the local flora of Coatesville and vicinity, and in 1858 indulged in the great pleasure of a

botanical excursion to Florida. Mr. Canby always spoke of this trip as one of the most delightful of his botanical experiences. The excursion is of public interest because it was very influential in extending Mr. Canby's interest in the North American flora, of which he afterward accumulated such an excellent representation.

Two years later, he made extensive collections in the north-eastern United States and in Canada, afterward using this material for exchange purposes, in building up his herbarium. In the succeeding years he made a number of similar more or less extended collecting tours in different portions of the country, and accumulated a large amount of exchange material. Among his exchange correspondents were Doctors Gray and Engelmann, through whom his exotic herbarium was largely acquired, although he arranged a number of similar exchanges during a brief trip to Europe in 1859(?).

In 1866, Mr. Canby abandoned farming, and took up his residence in Wilmington, where he quickly laid the foundation for a broad and highly successful business career; fairly successful in his own interest, more so in the sterling honesty and punctilious honor with which he guarded the interests which others confided to his keeping. He was for a time President of the Delaware and Western Railroad and, upon its absorption by the Baltimore and Ohio, he became a Director of the latter company, a position which he held up to the time of his death. In 1880, he became President of the Wilmington Savings Fund Society, which position, also, he held at the time of his death. He was connected with various other financial enterprises and was especially active in conducting or advising in the finances of various benevolent organizations, especially the Home for Friendless and Destitute Children. He was a member of the Presbyterian Church and was active in church and Sabbath-school work. Probably no other of the numerous public enterprises with which he was connected interested him more, or yielded greater or more permanent results, than the admirable public park system of his city, of which he was one of the designers. He continued active in the administration of these parks as long as he was able to work, and the preservation of their features of natural beauty, the liberality of their treatment, and the development of their scientific

value, were largely due to his influence. Mr. Canby was an earnest member of the Republican party, though never narrow or partisan in these relations.

It is not a very rare occurrence for active business men also to pursue some scientific avocation with activity and success ; but it must always be regarded as remarkable that one with such numerous and varied interests in financial, religious, charitable and social life, and in city government, and who devoted to them all sufficient time and energy to have left a strong impress upon them, should have also found time to perform the vast amount of herbarium work for which Mr. Canby was noted.

As a botanist, Mr. Canby was a contemporary, and an honored correspondent and beloved associate, of Torrey, Gray, Watson, Engelmann, Thurber, Sullivant, Porter, Traill Green, Vasey, Hall, Bebb and many others of their day, and he was a typical representative of their school. For most of these men, Botany, so far as their active interest in it extended, meant the accumulation of a herbarium and the study of generic and specific relationships. The amazing activity of the last quarter of a century in the investigation of plant anatomy, morphology, physiology and chemistry, could scarcely have been conceived of by them, and those who, like Mr. Canby, lived to witness it, were not qualified, either by taste or training, to participate in it. To these men, moreover, Gray's Manual represented about the exact facts of their science, so far as the local flora was concerned. That the systematic botany of that day was radically wrong in its conception of specific limits ; that every township abounded in valid species which had been loosely aggregated with others ; that Gray's Manual required expanding by about twenty per cent., and Chapman's by fifty : are ideas which would have been scouted by most of them, were, indeed, almost bitterly resented by some, upon the merest suggestion. Yet the general correctness of this modern view is now recognized by nearly all, and Mr. Canby had been able, before his death, largely to accept it. It is upon the basis of the then prevailing views that his herbarium-work must be judged ; and it can be said that he was accustomed to notice and to note the forms, though he did not fly in the face of prevailing custom in their interpretation.

Besides the above-mentioned exchange resources employed by Mr. Canby in enlarging his herbarium, he was a liberal purchaser of collectors' sets, especially of American plants. In 1892 his herbarium comprised 30,000 species and not less than five times that number of specimens. An outline of its composition has been published by the writer (Bull. Torrey Club, 19: 336). Its cases had increased in number until they entirely outgrew the accommodations of Mr. Canby's home. Room after room, and finally the halls, had been invaded; alterations had even been made for it, and again its quarters had become crowded, until at length Mr. Canby decided to dispose of it, and it was purchased by the College of Pharmacy of the City of New York in the year named. Here it has been carefully preserved but, unfortunately, the conditions have not been favorable for its continued growth. With his own herbarium off his hands, Mr. Canby at once applied himself to developing that of the Society of Natural History of Delaware, which before the time of his death, had come to number more than 13,000 species.

All Mr. Canby's herbarium work was performed with the most scrupulous care, as to both mechanical and scientific details. All specimens were mounted with his own hands, on the best of paper and with such a display as to admit most perfectly of their study in this position. At frequent intervals thereafter they were brushed over, to remove dirt and exclude vermin. All inscriptions were made in a clear and beautiful hand, and are remarkably full, both as to records and opinions. The genus-covers are equally well inscribed, bearing the number of the family, according to the Benthamian arrangement, the number, name and author of the genus, and the page reference to Bentham and Hooker's *Genera Plantarum*.

Like most of the botanists of his day, Mr. Canby studied botany because he loved plants. To him plants were living individuals, and herbarium specimens derived their interest from the fact that they were the best obtainable representatives thereof. While the botanical studies of that time lacked the scientific value, and ultimately, the economic value of those of the present, they embodied a grace and conferred a delight as unknown to a host of unfortunate laboratory slaves of the present generation as is the scent

of fresh clover to a city car horse. That good-fellowship which was promoted by the botanical "clubs" of Mr. Canby's generation is now of historical interest, and the new regime has not yet supplied anything that can be compared with it. The death of Mr. Canby reminds us of how few of his former associates still remain with us.

NOTES ON EVENING PRIMROSES

BY KENNETH K. MACKENZIE

One of the most noticeable and common plants along the line of the Chesapeake & Ohio Railroad on both sides of the boundary line between Virginia and West Virginia is an evening primrose with unusually large yellow flowers. Growing on open sunny clay banks and along the rivers in loose, rocky soil, it forms one of the characteristic plants of the country, and almost entirely replaces the common *Oenothera biennis* L. It may be described as follows:

Oenothera argillicola sp. nov. Biennial, with numerous stems ascending from the same root, 5-15 dm. high. Stems puberulent, but otherwise without pubescence: leaves of the stemless plant of the first year rosulate, 6-15 cm. long, the blades oblanceolate, 15 mm. or less wide, sinuate, acute, puberulent on both sides, the mid-nerve strongly developed, tapering at the base to a long, rather narrowly winged petiole; cauline leaves of the flowering plants of the second year with narrowly linear-lanceolate blades, the well-developed ones 6-8 cm. long, 7 mm. or less wide, remotely sinuate-dentate, acute, glabrous or slightly puberulent, tapering to a petiole-like base and often strongly decurrent on the stem, forming well-developed ridges: calyx-tube 3-4 cm. long and longer than the sepals, perfectly glabrous, as also are the sepals, the tips of the latter free, spreading, often 3-4 mm. long: petals bright yellow, obcordate, crenulate, 3-4 cm. long, so that the open flower is often 6-8 cm. across: capsules perfectly glabrous, 2-3 cm. long, sessile, gradually tapering upward from the broad base and often strongly curved, somewhat quadrangular, strongly ribbed: seeds angled, 1-1.5 mm. long.

This plant with its ascending, non-hirsute stems, narrow leaves, large flowers, glabrous calyx and glabrous, long-tapering capsule is one of the most distinct species of this section of the genus, and is well worthy of cultivation.

Type collected by myself near White Sulphur Springs, West